Pearson Edexcel

A level Music Technology

2022 Exemplar

9MT0/41 & 9MT0/42

Producing and analysing

© artwork: Mark Bolitho | Origami photography Pearson Education Ltd/Justin Hoffman

Contents

3. Resources required
4. Aims and objectives
5. Question 1
9. Question 2
11. Question 3
14. Question 4
20. Question 5
23. Question 6
29. Frequently asked questions

Resources you may want to support your session

9MT0/41 question paper

9MT0/41 mark scheme

Specification pages 42-52

Audio and MIDI files which accompany the question paper

Audio files which accompany the mark scheme

Audio files of the exemplar candidate answers

DAW software to play .aif and .wav files alongside the mark scheme audio

Aims and Objectives

Receive feedback on the national performance of candidates in exam 2022 9MT0/41 producing and analysing.

Consider why candidates were successful or unsuccessful in answering questions.

See how the Chief Examiner assessed actual student work.

Read answers to frequently asked questions.

Question 1

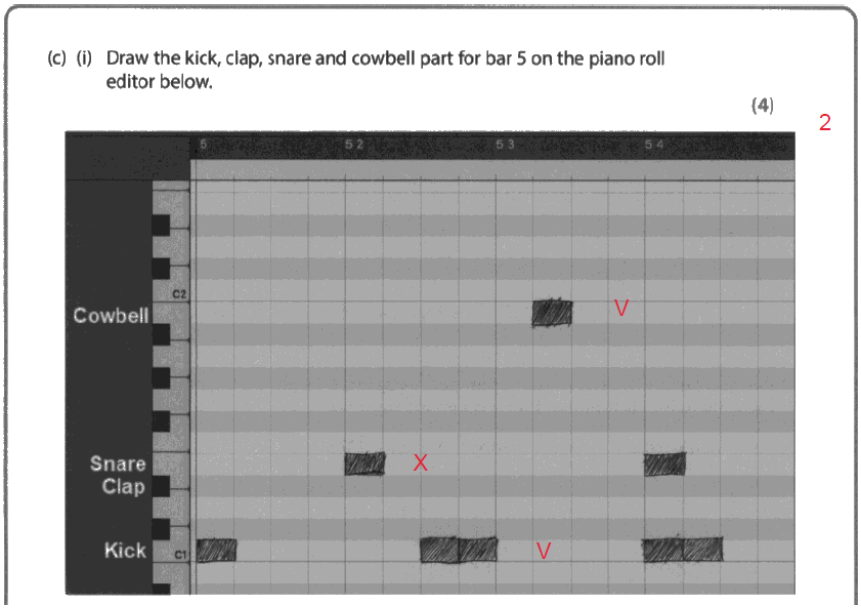
This question was intended to be a series of short answer accessible questions to ease the candidates into the exam. The difficulty was gradually ramped up through question 1.

(a) This was intended to be an easy starter question. Nearly all candidates scored correctly.

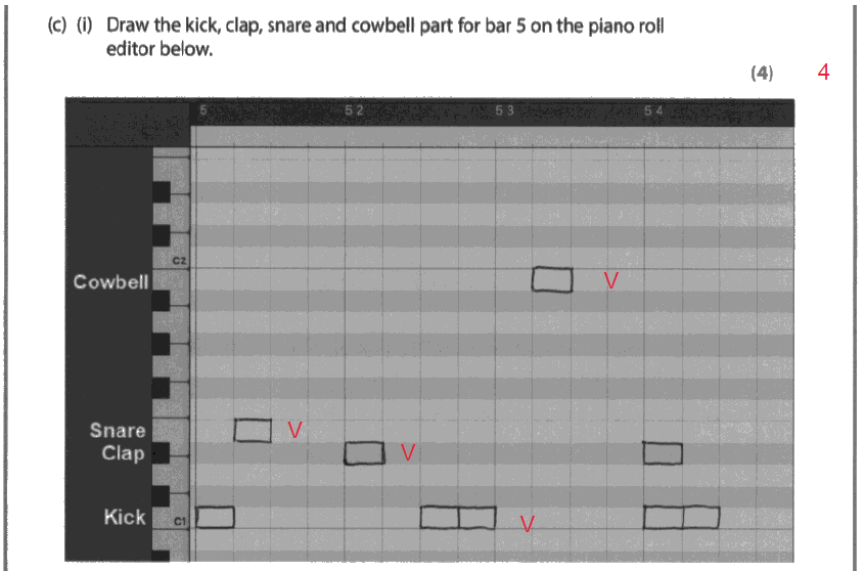
(b) Candidates had to notice the hi-hat rolls for full credit on this question.

(c)(i) There was a mix of success in this question. Quite a few responses were completely inaccurate. The most common error was to mix or combine the snare and clap.

This example scored 2 marks for the kick and cowbell. The clap was notated as a snare, and the snare hit is missing:



This example scored 4 marks:



(c)(ii) "One-shot" was the most common correct answer. However, credit was given for a clear description of what a one-shot sample is:

(ii) When programming MIDI drums, state why the length of the notes makes no difference to the sound.

(1) 1

Because the length of the actual sound is determined by the sample in the software instrument, not the length of the note

= length governed by envelope...

A common incorrect answer was stating that drum sounds are short:

(ii) When programming MIDI drums, state why the length of the notes makes no difference to the sound.

(1) 0

Because drums naturally cutoff quickly

(c)(iii) This was mostly answered correctly with "7". Examiners allowed "8" as an answer to allow for understanding that it was one byte.

(c)(iv) This was mostly answered correctly showing that candidates are well prepared for this binary question. Working out was often seen in the margins:

(iv) All drum sounds have note velocity of 98. Calculate the value of 98 in binary.

(1)

01100010

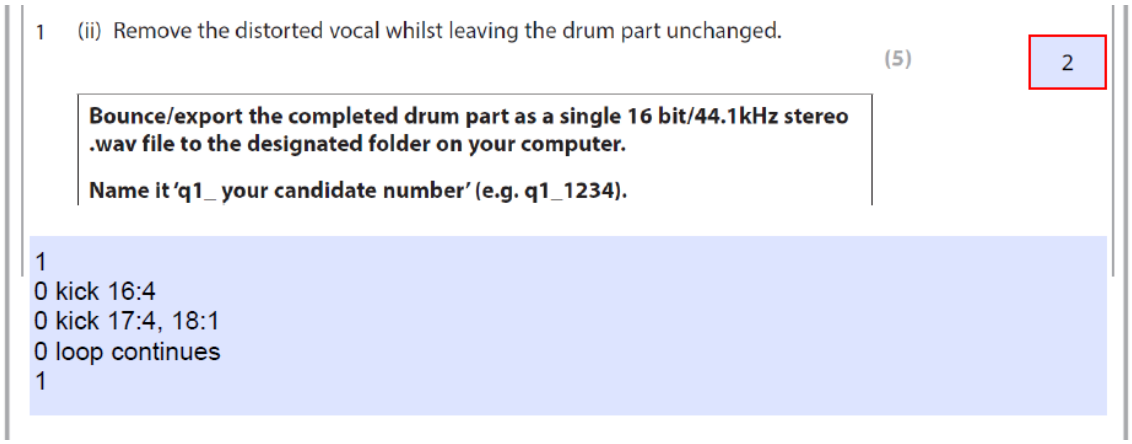
128	64	32	16	8	4	2	1
0	1	1	0	0	0	1	0

98
64
34

(d)(i) This question was mostly answered correctly. It was pleasing to see that candidates could distinguish distortion types.

(d)(ii) This question differentiated well across 1-5 marks. 0 marks was rare. Some candidates just didn't know what was expected and either left it completely unaltered or tried to EQ out the noise scoring 0 marks. Most scored 1 mark for "in time" and another for "no clicks". Getting the patterns correct in bars 15-16 and bars 17-18 was challenging, so these bars often scored no marks. Surprisingly, many candidates just looped through bar 19 and didn't notice that the drums stopped.

In this example the candidate had replaced the drums, but the patterns had errors in them because wrong bars were used. Listen to audio file "2022 9MT042_q1_2 marks":


1 (ii) Remove the distorted vocal whilst leaving the drum part unchanged. (5)

2

Bounce/export the completed drum part as a single 16 bit/44.1kHz stereo .wav file to the designated folder on your computer.

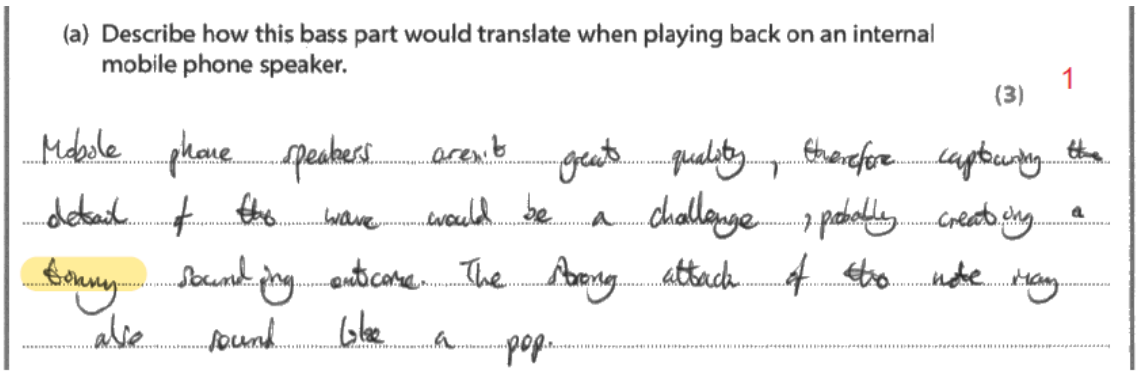
Name it 'q1_ your candidate number' (e.g. q1_1234).

1
0 kick 16:4
0 kick 17:4, 18:1
0 loop continues
1

Question 2

Question 2 was two short questions about the bass part that differentiated well across the mark range.

(a) This question differentiated well across 0-3 marks. Some candidates had good understanding of the limitations of mobile phone speakers and the associated effects of playing bass frequencies through them. There was a mix of success as these two examples show. This candidate wrote a lot but only scored 1 mark:

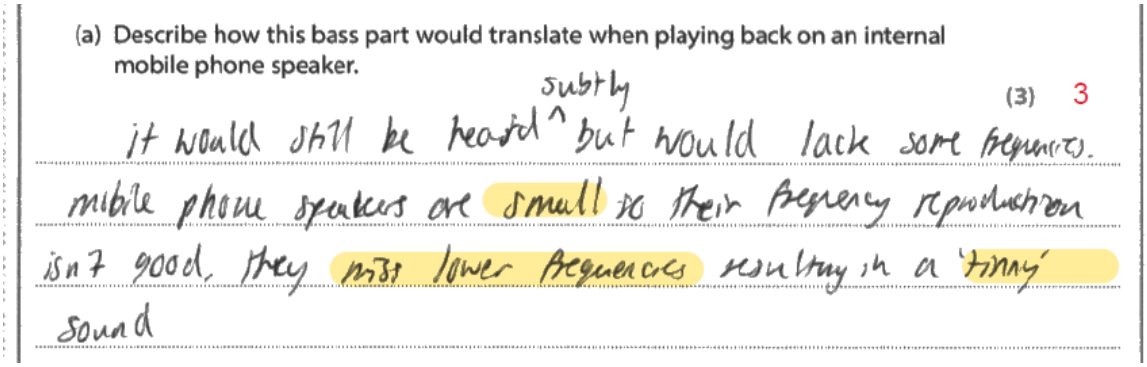


(a) Describe how this bass part would translate when playing back on an internal mobile phone speaker.

(3) 1

Mobile phone speakers aren't great quality, therefore capturing the detail of the wave would be a challenge, probably creating a funny sounding outcome. The strong attack of the note may also sound like a pop.

This candidate scored the maximum of 3 marks:

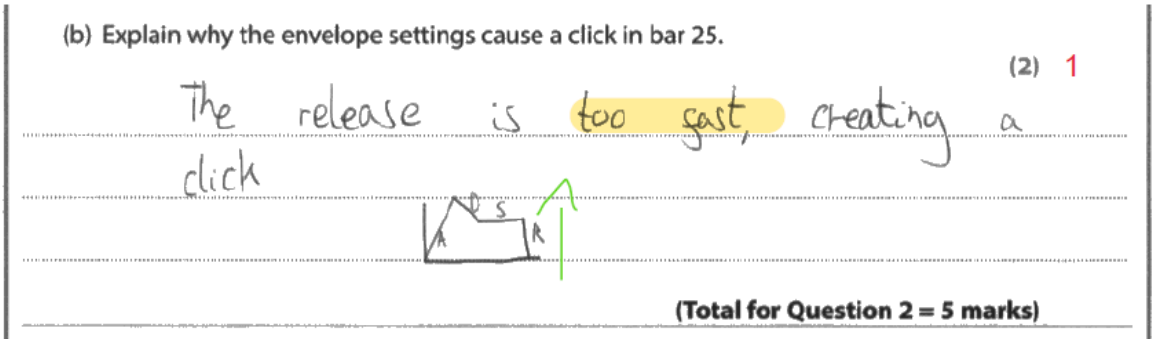


(a) Describe how this bass part would translate when playing back on an internal mobile phone speaker.

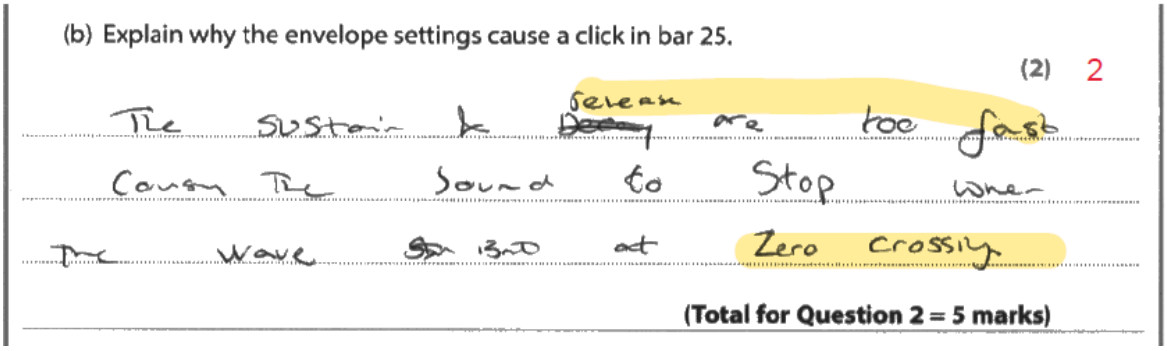
(3) 3

it would still be heard subtly but would lack some frequencies. mobile phone speakers are small so their frequency reproduction isn't good. they miss lower frequencies resulting in a 'tinny' sound

(b) The strongest candidates scored 2 marks for this question, but the majority scored 1 mark. The overwhelming majority of students were able to articulate knowledge of amplitude envelopes and the affect the release time has on the bass note. This candidate even draws a diagram, but it's the same mark as "release too short":


(b) Explain why the envelope settings cause a click in bar 25.
(2) 1
The release is too fast, creating a click
A
D
S
R
(Total for Question 2 = 5 marks)

Fewer candidates were able to further comment on what is then happening from a waveform perspective. This candidate scores 2 marks despite the slight muddle about sustain:



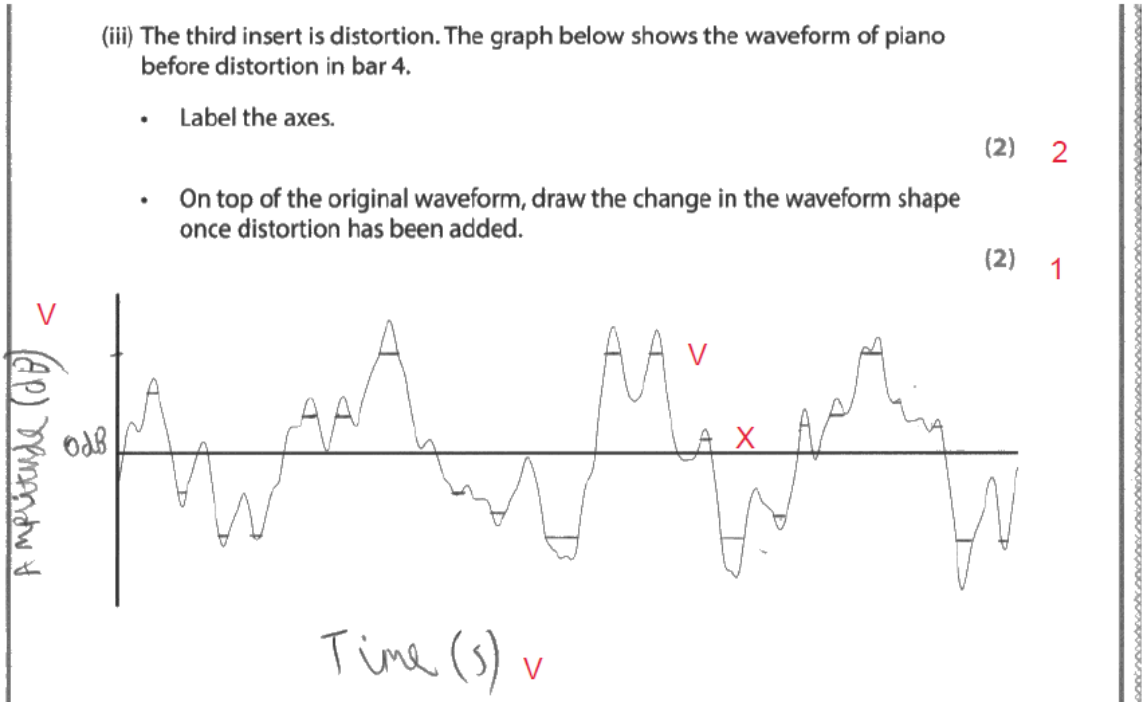
Question 3

Question 3 was about creating the piano timbre. Part (a) was designed to lead candidates to hearing the processing required for part (b).

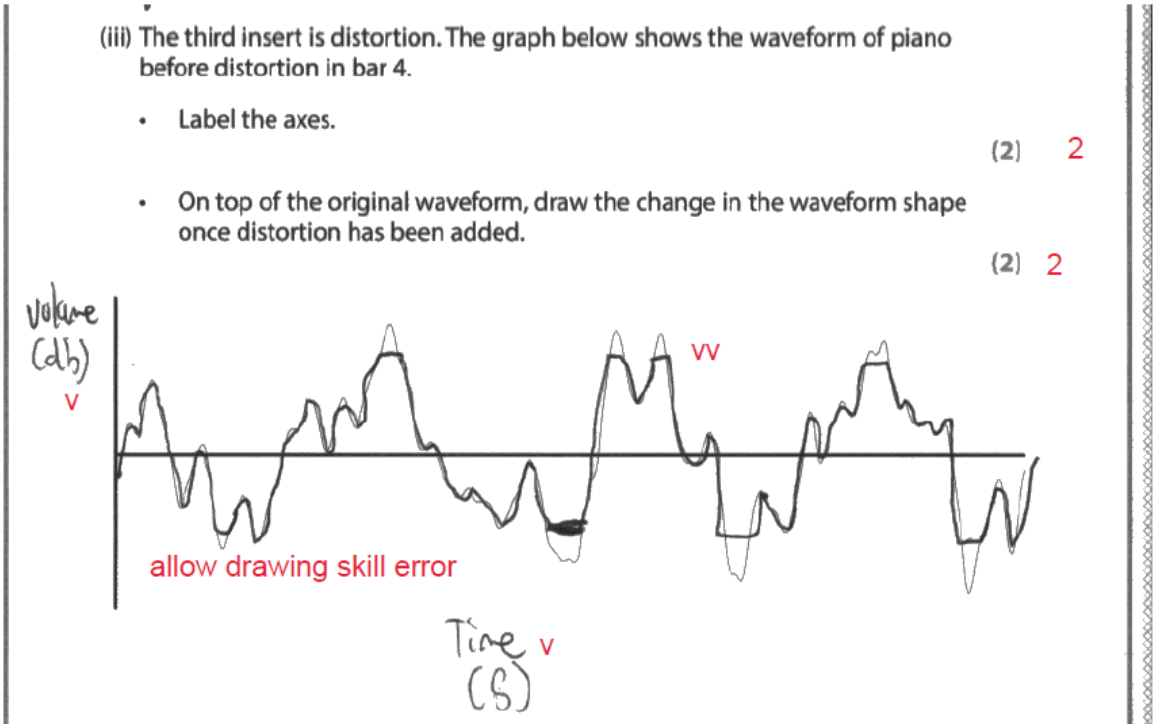
(a)(i) Most candidates incorrectly chose “reverb” instead of compression.

(ii) Most candidates correctly chose “chorus”.

(iii) Nearly all candidates scored 2 marks for the axes. A similar question to this has appeared several times over the years, so it was surprising how few candidates didn't draw a clipped waveform correctly. Many scored only 1 mark for the waveform by clipping at different amplitude levels, rather like a bitcrusher:


(iii) The third insert is distortion. The graph below shows the waveform of piano before distortion in bar 4.
• Label the axes.
(2) 2
• On top of the original waveform, draw the change in the waveform shape once distortion has been added.
(2) 1
V
Amplitude (dB)
0dB
V
X
Time (s) V

Though not perfectly drawn, this candidate scored full marks:


(iii) The third insert is distortion. The graph below shows the waveform of piano before distortion in bar 4.
• Label the axes.
(2) 2
• On top of the original waveform, draw the change in the waveform shape once distortion has been added.
(2) 2
Volume (db)
v
vv
allow drawing skill error
Time (s) v

3(b) The most common score was 4 or 5 marks due to students not matching distortion and sustain; not being brave enough with pushing the FX really hard, or maybe just relying on presets. A significant minority of students made changes to bars 4-5 too. Mono signal wasn't common but a mono guitar amp sim last in the chain would have rendered any stereo chorus back into mono.

In this example the candidate had incorrectly used reverb to create more sustain (very common) so there wasn't anywhere near enough sustain to match bars 4-5. The distortion was not heavy enough to affect the tails; only the peaks were distorted. Please listen to audio file "2022 9MT042 Exemplar_q3_5 marks":

2 (b) Recreate the same piano sound as bars 4–5 for the whole piano part. (7) 5

Bounce/export the completed piano part as a single 16 bit/44.1kHz stereo .wav file to the designated folder on your computer.

Name it 'q3_ your candidate number' (e.g. q3_1234).

1 some extra sustain
2 stereo chorus added
1 some distortion on the peaks, but not through the tails
1 join is clean

In this example the candidate had used very heavy compression to add sustain, more than bars 4-5, but was brave enough to use extreme settings so was worthy of 2 marks for compression. The distortion was heavy enough to continue through the tails. Please listen to audio file "2022 9MT042 Exemplar_q3_7 marks":

2 (b) Recreate the same piano sound as bars 4–5 for the whole piano part. (7) 7

Bounce/export the completed piano part as a single 16 bit/44.1kHz stereo .wav file to the designated folder on your computer.

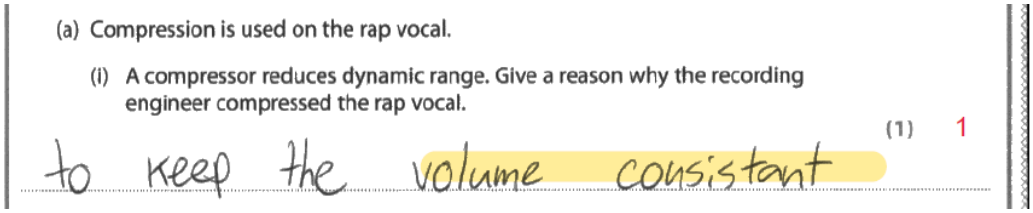
Name it 'q3_ your candidate number' (e.g. q3_1234).

2
2
2
1 more compressed, but similar volume on tails

Question 4

Question 4 was about the vocal parts: the lead vocal and the scratch vocal that the candidate would need to create.

(a)(i) This was mostly well answered with variations on consistent volume, but all the options in the mark scheme were covered. References to dynamics were not credited because “dynamic range” was given in the question. This candidate scored 1 mark:



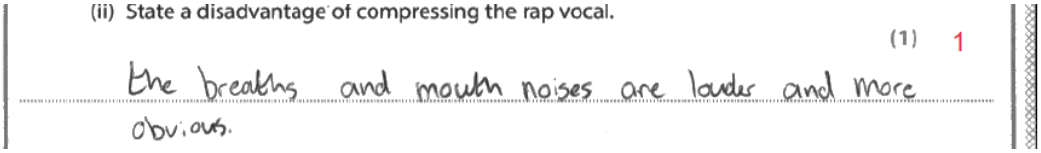
(a) Compression is used on the rap vocal.

(i) A compressor reduces dynamic range. Give a reason why the recording engineer compressed the rap vocal.

(1) 1

to keep the volume consistant

(ii) This was mostly well answered with correct variations on unwanted noise. The most common “incorrect” answers were variations on “takes away the feeling”. This candidate scored 1 mark:



(ii) State a disadvantage of compressing the rap vocal.

(1) 1

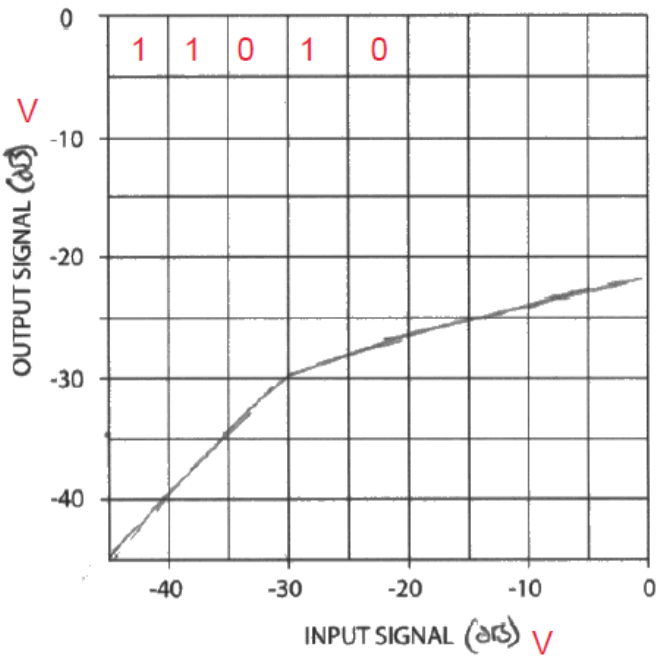
the breaths and mouth noises are louder and more obvious.

(iii) This question differentiated well across candidates of all abilities. Nearly all scored 2 marks for correctly identifying the axes with a few achieving full marks for the question. A few candidates drew a line which wasn't a compression curve. In order of commonly scored, candidates scored the flatter line mark, then the hard knee mark, then the 1:1 threshold mark and 10:1 slope mark with only the most able achieving the mark for gain make-up.

This candidate shows a middle range answer. The axes are correct (2). There is a 1:1 line to -30 input (1), the 10:1 line is flatter than the 1:1 line (1), but not flat enough (0), it's hard knee (1), there is no gain make-up (0):

On the graph below:

- Label the units on the axes. (2) 2
- Draw the response curve of the compressor. (5) 3



11010

(b) This question differentiated well across the mark range:

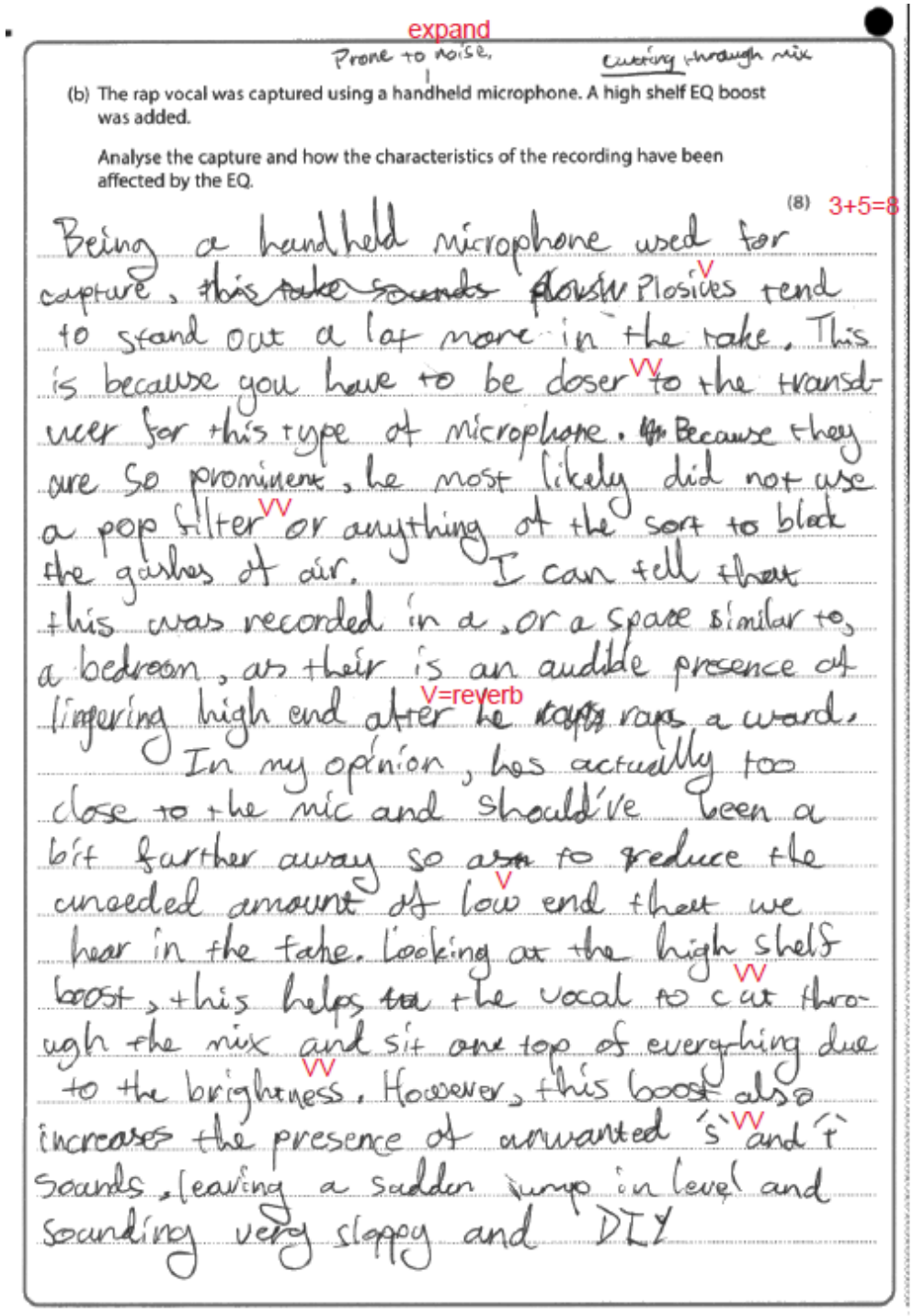
Movement noise, plosives and proximity effect were commonly discussed.

Most candidates that scored well described the effects of the EQ boost, e.g. clarity, sibilance, de-esser.

A good number of candidates made the link of dynamic mic and the shelf compensating for lack of highs.

Some candidates talked about the varying distance of a handheld mic but this wasn't credited because it isn't an issue in this recording; anyhow varying distance can still be a problem with a mic on a stand if the singer dances around!

This candidate did well to score full marks despite not liking the recording quality, stating that it was “sloppy”! “V” shows AO3 marks; “VV” shows AO4 marks.



expand

Prone to noise. cutting through mix

(b) The rap vocal was captured using a handheld microphone. A high shelf EQ boost was added.

Analyse the capture and how the characteristics of the recording have been affected by the EQ.

(8) 3+5=8

Being a handheld microphone used for capture, this take sounds plosive V plosives tend to stand out a lot more in the take. This is because you have to be doser VV to the transducer for this type of microphone. Because they are so prominent, he most likely did not use a pop filter VV or anything of the sort to block the gushes of air. I can tell that this was recorded in a, or a space similar to, a bedroom, as their is an audible presence of lingering high end after he stops raps a word. V=reverb

In my opinion, has actually too close to the mic and should've been a bit further away so as to reduce the unneeded amount of low end that we hear in the take. Looking at the high shelf V boost, this helps to the vocal to cut through the mix VV and sit one top of everything due to the brightness VV. However, this boost also increases the presence of unwanted 's' and 't' sounds, leaving a sudden jump in level and sounding very sloppy and DIY

This candidate scores no marks despite writing nearly a page. They mention the word cardioid, but it doesn't link it to this recording. This answer is very general and makes no specific points.

(b) The rap vocal was captured using a handheld microphone. A high shelf EQ boost was added.

Analyse the capture and how the characteristics of the recording have been affected by the EQ.

(8) 0

By using a handheld microphone, you are limited to one audio shape and less EQ. Compared to studio set up cardiod / multi range microphones, handheld microphones are mainly seen as used for live performances/previous decade microphone recording. Therefore, this tells us that the capture is somewhat less professional than a set studio microphone, and will need heavy EQ added, therefore the need of usage of a high shelf EQ. This EQ boost adds features that enable more balance of sound, reducing lower frequencies and unwanted sound. We can tell that the high shelf boost has contributed greatly to the vocal recording, and it could be argued that without this, the audio files may have bled through and completely been uncomplimentary par each other. The vocal track blends nicely into the piano chords and against the drum beat. The high shelf filter has successfully removed the ~~highest~~ unwanted frequencies, providing a successful sound.

(c)(i) Not many candidates answered this correctly, so it differentiates at the higher grades. Candidates didn't seem to know about the relative sound qualities of different formats.

(ii) The distractors made this question quite easy. A few responded inaccurately with "quantise", but most chose the correct option, "time-stretch".

(iii) This question was interesting because candidates had to find a sample in a commercial recording and recontextualise it. **The** question worked as intended to differentiate the higher grades. Advance Information was given for this question; however candidates didn't seem better prepared for it than normal. **It** yielded a range of responses, from 0-9 marks, but marks above six were rare. The majority of candidates scored 3 marks; the correct sample but at the wrong pitch (2) and some shallow pitch bend (1)."

The majority of candidates were able to locate and prepare the sample without introducing any timing issues, clicks or glitches. Some mistakenly selected an earlier version of the sample with drums in the background, and a minority sampled from the 'scratch vocal example' instead of the Ariana Grande track, leading to an incomplete sample.

Pitch-mapping of the sample rarely matched the example given, with the majority of candidates pitching the sample an octave too high throughout.

Submissions where the pitch bend range had been successfully adjusted to one octave were exceptionally rare. The majority of candidates left the pitch bend range set to the default value of 2 semitones.

The most common issue with the final mark was the release of the amplitude envelope being set too high, probably the default. Learners who took care to match the pitch and envelope settings to the example achieved the best in this question.

A sizeable minority of candidates used a MIDI piano for the question.

Not attempting the scratch vocal also had an impact on candidates' marks for 5(b), 5(f) and 5(g).

This candidate was similar to many in that the pitches were wrong but still managed to score 5 marks. 2 marks for the sample selection (but it had drums in the sample so taken from wrong part of the song). 2 marks for the pitch bend range which was more than 2 semitones. 1 mark for a short release and no clicks. Please listen to audio file "2022 9MT042 Exemplar_q4_5 marks":

Create a scratch vocal part.

- Using 'break up with your girlfriend extract.wav', sample the sung phrase "You without me" ensuring that no other instruments are present.
- Use 'scratch vocal.mid' to trigger the sample.
- The sample must play the pitch and rhythm as illustrated in 'scratch vocal example.wav'.
- Match the pitch bend range with 'scratch vocal example.wav'.

(9) 5

Bounce/export the completed scratch vocal part as a single 16 bit/44.1kHz stereo .wav file to the designated folder on your computer.

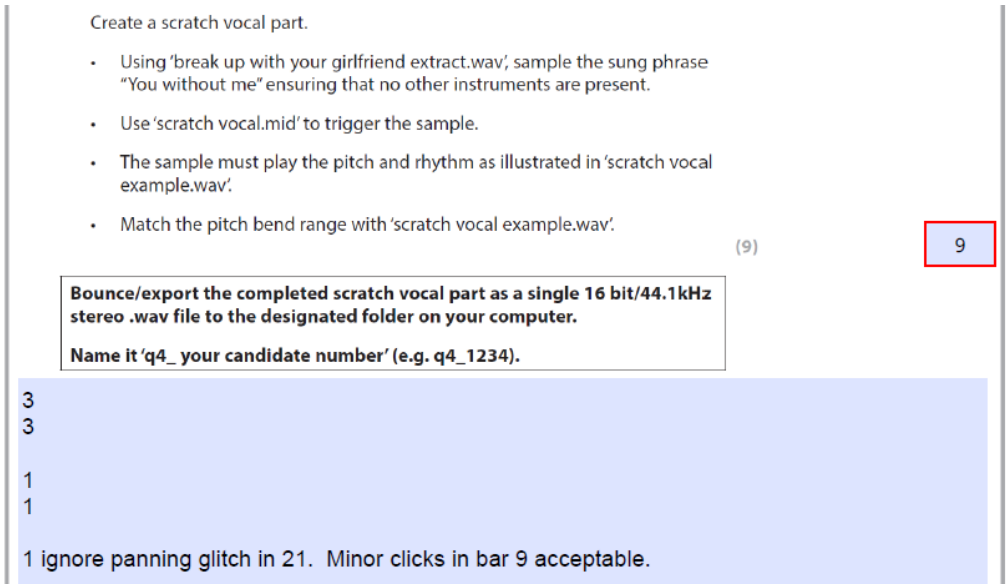
Name it 'q4_ your candidate number' (e.g. q4_1234).

2 drums present, too high
2 range quite wide

0 too high
0 too high

1 short release

This candidate submitted an .aif rather than a .wav, however it was still assessable. They scored full marks. Please listen to audio file “2022 9MT042 Exemplar_q4_9 marks”:



Create a scratch vocal part.

- Using ‘break up with your girlfriend extract.wav’, sample the sung phrase “You without me” ensuring that no other instruments are present.
- Use ‘scratch vocal.mid’ to trigger the sample.
- The sample must play the pitch and rhythm as illustrated in ‘scratch vocal example.wav’.
- Match the pitch bend range with ‘scratch vocal example.wav’.

(9) 9

Bounce/export the completed scratch vocal part as a single 16 bit/44.1kHz stereo .wav file to the designated folder on your computer.

Name it ‘q4_ your candidate number’ (e.g. q4_1234).

3
3

1
1

1 ignore panning glitch in 21. Minor clicks in bar 9 acceptable.

Question 5

This question had a range of editing, processing and effects-based tasks to cater for a wide range of candidate ability. Although all questions differentiated across the grade range, they were targeted at different ability levels. Parts (a) and (b) were targeted at E/D candidates, scoring full marks in parts (c), (d) and (e) was expected of the more able candidates though the less able could also access some marks, and parts (f) and (g) were intended to be accessible for all students

Candidates should answer the questions and not add other creative panning, dynamic processing, EQ and effects not specified in the question. Full credit may not be given because the processing that the question asks for may not be clearly audible.

Candidates must check their wav files during the exam time. Examiners often see q5 files that are 2 bars long or have parts missing (because something was soloed). These types of q5 files haemorrhage marks.

(a) This was a basic noise editing task aimed at E grade candidates, however it seemed to differentiate at a higher grade because candidates didn't pay enough attention to the noise after "Yo". Most students were successful in removing most noise, usually leaving noise after 'Yo' to score 1 mark. Occasionally, some noise was left in 3:3 or 'Yo' was cut from the mix, again scoring 1 mark. A minority successfully removed all noise to score 2 marks.

(b) This question was aimed at E grades for a straightforward 3 marks so was mostly successfully completed. Candidates who did not attempt 4(c)(iii) or omitted the scratch vocal from the mix scored 0 marks because there was no part to pan.

(c) This question was aimed at higher grades. This was answered well with able candidates scoring full marks. Some candidates set the threshold too low, so the hi-hats were triggering the gate too, scoring 2 marks. Common problems were not gating bar 18 (misinterpreting 12-18) or gating the whole piano part, scoring 2 marks. Approximately 10-20% of candidates did not attempt this question at all.

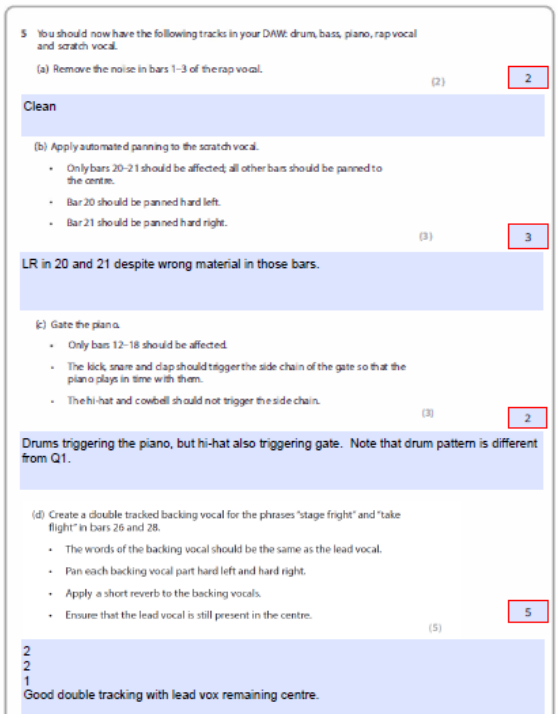
(d) This question was originally intended to differentiate lower-mid grades with a simple copy and paste with slight delay to create double tracking. However, the question seemed one of the hardest in the paper with full marks very rare because candidates failed to delay/pitchshift/process the copy of the lead vocal; merely copying the vocal exactly to another track would just add more level and not sound like a separate vocal. The most common mark was some unsuccessful attempt at backing vocals, e.g. making the lead vocal louder presumably by copy and pasting to another track and not delaying/pitchshifting (1) plus reverb on correct phrases (2) scores 3 marks. It was rare to hear a central lead vocal distinguishable from separate backing vocals opposite panned.

(e) This question worked as expected at differentiating across all grades. The most common responses gained marks for mono delay (1) in crochets (1), scoring 2 marks total. More successful candidates applied a HPF for a further 2 marks. Candidates found it hardest to be brave with the feedback and turn it up high enough to fill the gap before the chorus

(f) The stems are deliberately mastered at wildly varying volumes to ensure that the candidate needed to listen (rather than look at fader positions) to earn credit. The best candidates used their ears to balance all five parts, achieving full marks. Many candidates had a tendency to leave the bass too quiet.

(g) A great deal of candidates cut the tail at the end; a familiar trend in coursework too. Too commonly, the MIDI scratch vocal was a bar out of sync.

This candidate had a variety of success in question 5. This was a rare example of success in 5(d), however unusually the candidate didn't attempt 5(e) at all. Please listen to audio file "2022 9MT042 Exemplar_q5_J".



5 You should now have the following tracks in your DAW: drum, bass, piano, rap vocal and scratch vocal.

(a) Remove the noise in bars 1–3 of the rap vocal. (2) — 2

Clean

(b) Apply automated panning to the scratch vocal.
- Only bars 20–21 should be affected; all other bars should be panned to the centre.
- Bar 20 should be panned hard left.
- Bar 21 should be panned hard right. (3) — 3

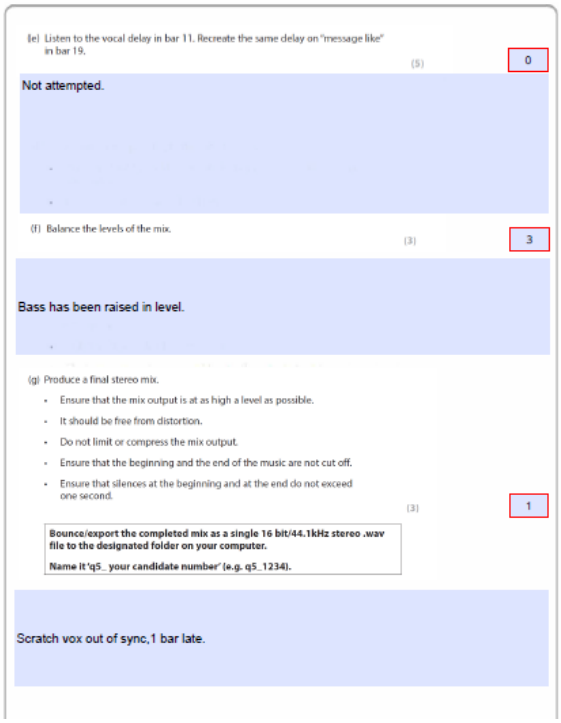
LR in 20 and 21 despite wrong material in those bars.

(c) Gate the piano.
- Only bars 12–18 should be affected.
- The kick, snare and clap should trigger the side chain of the gate so that the piano plays in time with them.
- The hi-hat and cowbell should not trigger the side chain. (3) — 2

Drums triggering the piano, but hi-hat also triggering gate. Note that drum pattern is different from Q1.

(d) Create a double tracked backing vocal for the phrases "stage fright" and "take flight" in bars 26 and 28.
- The words of the backing vocal should be the same as the lead vocal.
- Pan each backing vocal part hard left and hard right.
- Apply a short reverb to the backing vocals.
- Ensure that the lead vocal is still present in the centre. (5) — 5

2
2
1
Good double tracking with lead vox remaining centre.



(e) Listen to the vocal delay in bar 11. Recreate the same delay on "message like" in bar 19. (5) — 0

Not attempted.

(f) Balance the levels of the mix. (3) — 3

Bass has been raised in level.

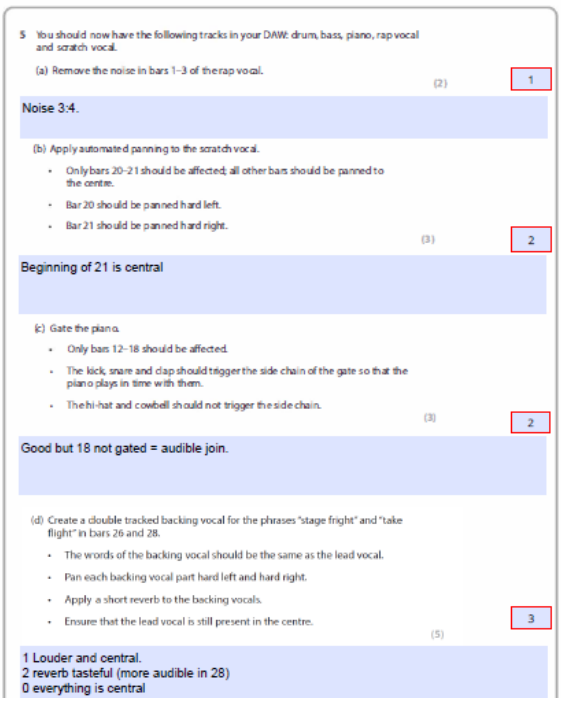
(g) Produce a final stereo mix.
- Ensure that the mix output is at as high a level as possible.
- It should be free from distortion.
- Do not limit or compress the mix output.
- Ensure that the beginning and the end of the music are not cut off.
- Ensure that silences at the beginning and at the end do not exceed one second. (3) — 1

Bounce/export the completed mix as a single 16 bit/44.1kHz stereo .wav file to the designated folder on your computer.

Name it 'q5_ your candidate number' (e.g. q5_1234).

Scratch vox out of sync, 1 bar late.

This candidate also had a variety of success in question 5. This was a typical example of 5(d) where the double tracking isn't audible as separate parts, it's just a little louder with some reverb added. Please listen to audio file "2022 9MT042 Exemplar_q5_B".



5 You should now have the following tracks in your DAW: drum, bass, piano, rap vocal and scratch vocal.

(a) Remove the noise in bars 1–3 of the rap vocal. (2) — 1

Noise 3:4.

(b) Apply automated panning to the scratch vocal.
- Only bars 20–21 should be affected; all other bars should be panned to the centre.
- Bar 20 should be panned hard left.
- Bar 21 should be panned hard right. (3) — 2

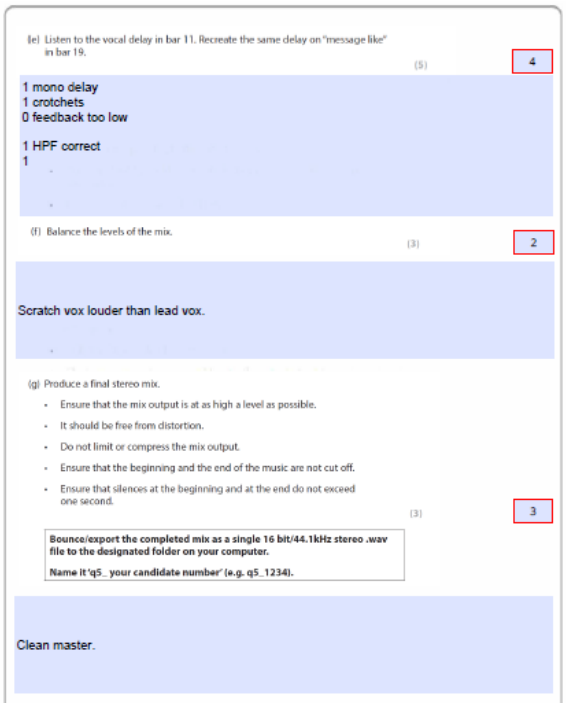
Beginning of 21 is central

(c) Gate the piano.
- Only bars 12–18 should be affected.
- The kick, snare and clap should trigger the side chain of the gate so that the piano plays in time with them.
- The hi-hat and cowbell should not trigger the side chain. (3) — 2

Good but 18 not gated = audible join.

(d) Create a double tracked backing vocal for the phrases "stage fright" and "take flight" in bars 26 and 28.
- The words of the backing vocal should be the same as the lead vocal.
- Pan each backing vocal part hard left and hard right.
- Apply a short reverb to the backing vocals.
- Ensure that the lead vocal is still present in the centre. (5) — 3

1 Louder and central.
2 reverb tasteful (more audible in 28)
0 everything is central



(e) Listen to the vocal delay in bar 11. Recreate the same delay on "message like" in bar 19. (5) — 4

1 mono delay
1 crotchets
0 feedback too low

1 HPF correct
1

(f) Balance the levels of the mix. (3) — 2

Scratch vox louder than lead vox.

(g) Produce a final stereo mix.
- Ensure that the mix output is at as high a level as possible.
- It should be free from distortion.
- Do not limit or compress the mix output.
- Ensure that the beginning and the end of the music are not cut off.
- Ensure that silences at the beginning and at the end do not exceed one second. (3) — 3

Bounce/export the completed mix as a single 16 bit/44.1kHz stereo .wav file to the designated folder on your computer.

Name it 'q5_ your candidate number' (e.g. q5_1234).

Clean master.

Question 6

Advance Information was given for this question. There were cases where candidates wrote a whole page about compression and scored 1 mark for “reduces dynamic range” because they were not applying their revision to the specific scenario. Other than that, the AI seems not to have affected the quality of the answers.

Bass guitar pedals were used as the stimulus, rather than a DAW plug-in, because it’s unlikely that candidates would have used these particular models (which were simplified for the exam), so no candidates are advantaged or disadvantaged depending on what DAW they use. In this question, all of the controls should have been familiar (or candidates could make reasonable judgments) because they have DAW equivalents. Candidates are expected to apply their knowledge to an unfamiliar diagram/picture and extrapolate how it would sound.

This question was designed to differentiate across all of the grades, including A*. E grade students tended to score 3-5 marks. Only A* students showed an intuitive understanding and scored more than 15 marks.

Though not bunched for all candidates, many candidates scored between 8-12 marks with the maximum of 5 AO3 marks, then a few AO4 marks, most commonly overdrive isn’t good for funk and wah is good for funk, and descriptions of the EQ making the bass muddy etc.

Candidates sometimes presented their answers in a table showing AO3 and AO4. This added an extra layer of work for the candidate as they tried to predict (mostly unsuccessfully) what the difference is between AO3 and AO4. Candidates would be better off not to trouble themselves with this and just enjoy demonstrating their knowledge and evaluative skills without labelling it AO3 and AO4.

In general, candidates found this question quite hard as they struggled to link the knob on the pedal to what it actually did and spoke in very vague terms. EQ was the best answered, followed by overdrive, followed by compression. There were still some really good responses though, especially when they knew how the wah worked, gaining them enough marks to access the top band.

Candidates who scored highest applied knowledge to the pedals and evaluated how they would interact with each other in the signal chain.

A frequent candidate error with the overdrive pedal was a confusion between gain and level controls with many writing that the level controlled the amount of the effect applied rather than being the output level. This rendered a lot of this paragraph hard to credit.

Several students wasted time and space by writing lengthy introductions without any creditable content, or restating previous points in conclusion paragraphs. Candidates are reminded to keep their responses concise and factual.

The most successful candidates were precise with their use of technical vocabulary, and were able to demonstrate an impressive depth of knowledge, often receiving a lot of credit for a single, well-constructed sentence.

This candidate, despite separating out what they thought was AO3 and AO4, didn't score many marks because the essay was too vague. Half of the 6 marks were for the EQ. "V" shows AO3 marks; "VV" shows AO4 marks. Looking at the levels based mark scheme, this answer is a level 2 answer that "demonstrates knowledge and understanding of production techniques/technology used, which are occasionally relevant but may include some inaccuracies" and "makes some evaluative and/or critical judgements about the production techniques/technology used".

SECTION B

Answer Question 6. Write your answer in the space provided.

6 Figure 1 shows a bass guitar pedal board. Evaluate the suitability of pedal settings for a funk bass guitar. 4+2=6

(20)

AO3	AO4
medium frequency is used on the Auto Dynamic Wah	• this should be switched to the lower end as bass is a low frequency instrument so cutting our higher frequencies would most the sound of the instrument itself
The lowest frequency on the bass equalizer is dipped slightly	• should be dipped because it then removes any rumble created by the low frequencies rumble not an issue for bass guitar • however, I would suggest it be dipped a bit more to make it more effective.
the compressor has been placed V in front of the equaliser	• the compressor should be after the equaliser as it will compress frequencies that are wanted to be cut out, making it harder.
the bass is plugged V into the guitar in	• it should be placed in the back in as it will then create modulation for a guitar not bass VV

14

AO3	AO4
midium compression is used	• this is good in controlling the power of a powerful instrument like a bass as it will not let it override other instruments but also give it the impact needed.
the gain used on the bass an the overdrive is fairly high	• this is orgcaddy too high per a base as using preamp effect, making the bass louder highlights and creates rumble which is unwanted sound. not linked to level
the higher frequencies of the equaliser have been v cut and the lower frequencies v boosted	• this is good in highlighting the deep pitch of the bass which it is intended to create as well as removing any vv hiss created by feedback.

This candidate writes clearly and concisely. The answer is well laid out with sub-headings so that the candidate can focus on the points and helps the examiner navigate the answer. This candidate achieves maximum credit for AO3, being capped at 5 marks. There are 15 AO4 points made. This written answer fulfils the level 5 descriptor of being "detailed" and "sophisticated". There is a "rational substantiated conclusion" about how the bass guitar would sound and its suitability for funk bass. This scores a maximum of 20 marks.

SECTION B

Answer Question 6. Write your answer in the space provided.

6 Figure 1 shows a bass guitar pedal board. Evaluate the suitability of pedal settings for a funk bass guitar. 8+15=20

(20)

Wah-wah Pedal:

- Cable in ~~out~~ is on 'guitar in' V
  - As it's a bass guitar, using the bass in would be better: VV=not suited to bass guitar
    - Targets different frequency ranges, may not be as effective or sound too high for the bass. VV=affects frequency range of wah
- ~~Attack~~ Set at ~50%, very long time.
  - Would be good for slow, ambient X sound, wouldn't be good for sharp sound required in funk.
  - Could help create a subtle effect.
- Freq + Sens set to middle - will give default ~~wah~~ sound

Bass overdrive

- Heavy overdrive
  - Will give it a gritty VV sound, audibly ~~was~~ very VV distorted
- EQ inactive, no VV cut/boost
  - ~~Used~~ all EQ is done using 'Bass Equaliser',
  - Keeps everything EQ related in one place, good organisation.
- Similar dry and wet V levels

- will allow sound of distorted and undistorted equally through VV

- Gain boost of 25%
  - will produce a louder sound
  - may cause clipping / hard V distortion
  - better to set gain levels at beginning or end of the chain

Bass Equaliser

- +10dB boost V at 50Hz band
  - could make instrument sound 'muddy' VV
  - could increase rumble or finger noise around the pickups, - very large VV ammount to boost, could cause distortion VV
- +15dB 120-400Hz band boost,
  - very large boost, could cause unwanted hard clipping or wanted, 'warm' overdrive from pushing bass amp
- 800-10kHz bands V cut
  - will remove some noise from finger VV=fret on string
  - creates space for other instruments in the frequency spectrum.

~~Could~~ Compressor

- Level meter shows only -10dB is being compressed
  - possibly needs dial turning up to compress the full bass sound.
- More VV compression will mean a longer ~~sustain~~ more even sustain on long notes

15

- Short V cables (TRS) connecting pedals
  - good, less chance VV of interference
  - TRS cables are balanced, meaning less chance of distortion / interference.

- Compression before V EQ is good,
  - creates a flatter ~~frequency~~ dynamic V range among frequencies, so cut/boost in EQ will be more level across frequency bands

General points (more)

- Wah-wah - typically used in VV funk genre to give a twangy feel

- Heavy overdrive - more common in Rock,
  - not so VV suitable for funk, sound is too jarring and dominating/harsh - may drown out other instruments

- Wah-wah frequency set to mid.
  - May not be audible as upper mids are cut by EQ, may be less effective as limited frequencies in that range

VV = in the range of most notes.

- Wah-wah ~~effect~~ clock light off - shows pedal as ineffective

(Total for Question 6 = 20 marks)

TOTAL FOR SECTION B = 20 MARKS
TOTAL FOR PAPER = 105 MARKS

16

Frequency Asked Questions

How are unexpected answers assessed?

During pre-standardisation, the Principal Examiner would look through at least 50 student responses to each question to test whether the mark scheme covers all reasonable answers. The mark scheme is adapted to include all reasonable answers that students write. A lot of the mark scheme is written in "student speak" so it's easier to apply by the examiners. If an examiner still finds an unexpected correct answer, this would be referred to the Principal Examiner for consideration.

Do candidates need to fill the answer space?

It states on the front of the exam paper, "There may be more space than you need." The answer spaces have to be big enough to contain big handwriting, as well as crossed out and replaced answers. Therefore it is most likely in all questions that students wont fill the answer space. Writing a lot and filling the space doesn't necessarily lead to a high mark.

Is this paper scanned and marked using ePEN software?

Yes, similarly to most Pearson exam papers. In 2022 the written answers were marked by a separate examiner team from the practical questions. The written answers, 41 paper, were marked using ePEN software which is an online system which displays questions from scanned scripts for examiners to assess; examiners do not have sight of a whole exam paper. The practical questions were combined to form the 42 paper and a single examiner marked all practical questions from a particular candidate.

In long answer questions, must students write in prose?

No. Bullet points, diagrams and tables are acceptable.

In long answer questions, are subheadings a good idea?

Yes. It would help the candidate structure their answer and avoid repetitive content. The indicative content in the mark scheme is divided up with subheadings to help examiners navigate; so should a good candidate answer.

For questions 1, 2, 3, 4 should the candidates bounce the whole track or just the fragment with the work?

Students should bounce the whole track starting at bar 1. This would make it easier for the examiner to navigate and line up the audio. Obviously in question 5, students should follow the top and tail instructions.

For questions 1, 2, 3, 4 what happens if a candidate doesn't solo their track?

If a track is not soloed as instructed, full credit cannot be given because the subtle processing won't be clearly audible. For example, in 1(d)(ii), examiners need to hear whether clicks are present. If the drum track also has bass and piano present, the clicks cannot be assessed. Unfortunately, examiners often see un-soloed tracks.

Is a DAW used to mark the audio tasks?

Yes. Examiners have a DAW project which contains mark scheme audio and some selected standardised candidate answers to compare to. Examiners insert the candidate audio into DAW tracks so the candidate audio can be directly compared. Some tracks have special processing so that instruments can be isolated. For example, in 5(d) there was some polarity/stereo processing that isolated the backing vocals from the mix so that could be soloed then assessed more easily. Examiners use a variety of DAW software.